Integration and Verification Processes Used in the Mapping Indiana Broadband Project

Data Integration: When data is received from a service provider, it is loaded into either Excel or Access depending on the number of records and file size. This table is then joined with a copy of the Census block *.dbf file from our census block shapefile. After the data has been joined, it is exported as a new *.dbf. The original Census block *.dbf is renamed to preserve the original integrity and the newly exported *.dbf is renamed to the same name as the shapefile. The shapefile is then loaded into ArcMap and a Feature Class is generated. The number of records is then validated against the number of records that were originally imported into either Excel or Access.

Data Loading: A final integration check occurs when the data is loaded into the data model. This includes the logic checks for values.

Third Party Data Check: For the October 2010 delivery, we spot checked service provider data against a data set that was derived from analysis of three other data sets: ReferenceUSA data containing IP address, email domain, x/y, and delivery technology (limited to fewer categories than our data model), incumbent local exchange carrier (ILEC), and cable multiple system operators (MSO). This check helps us verify the location of service by provider and, to a limited extent, technology of delivery.

Other Validation Processes:

- *Comparing source documents that duplicate geographies or content.* We have public domain data that covers most of the state. We compare this data to that provided by the Internet Service Providers. We note areas of discrepancy for follow-up using other verification methods listed here.
- *Collecting end-user data.* We are working with The Polis Center at Indiana University Purdue University Indianapolis to create a Google Map-based, user-friendly web application hosted on the IndianaMap portal to collect information from end-users about their location, broadband service provider, and speed (as captured from a speed test). The information collected from this website will be more and more valuable for data verification as the database grows. T
- *Using service providers' websites*, especially those that contain service area information. Many service providers have websites that give service area information (often address by address) to assist consumers. These sites are useful for spot checking.
- *Inspection of high-resolution orthophotography.* High-resolution orthophotography has been used to verify the existence and location of wireless towers. Where recent six-inch resolution orthophotography exists (cities and counties), it can also be used to verify the existence of residence connection boxes.
- *"Boots on the ground"* inspection. We visually inspect the existence of physical features, where feasible, when we have a question or conflict that can be resolved by an on-site inspection.